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## PROCEEDINGS

OF THE

## BIOLOGICAL SOCIETY OF WASHINGTON

## A NEW MOOSE FROM ALASKA.\* BY GERRIT S. MILLER, JR.

The Moose of Alaska has long been known to be the largest of American deer, but hitherto it has not been directly compared with true Alces americanus. During the summer of 1898 Mr. Dall De Weese, of Cañon City, Colorado, spent three months on the Kenai Peninsula, Alaska, in quest of large mammals for the United States National Museum. Of the Moose, the special object of his search, he secured four males and two females. These specimens show that the Alaskan Moose differs considerably from the animal inhabiting the eastern United States and eastern and central Canada. To the latter the specific names americanus,†lobatus,‡ and muswa § have been applied. I can find no name, however, based on the Alaskan animal, which may be called:

## Alces gigas sp. nov.

Type adult ♂ (skin and skull), No. 86166, United States National Museum, collected on the north side of Tustumena Lake, Kenai Peninsula, Alaska, in September, 1898, by Dall De Weese. Original number 16.

General characters.—A larger, more richly colored animal than the eastern moose. Skull with occipital portion narrower, palate broader, and mandible much heavier than in Alces americanus.

<sup>\*</sup>Published by permission of Secretary of the Smithsonian Institution. † Alces americanus Jardine, Naturalists' Library, XXI (Mammalia—Deer, Antelopes, Camels, &c.), p. 125, 1835. Eastern North America.

<sup>‡</sup> Cervus lobatus Agassiz, Proc. Boston Soc. Nat. Hist., II, p. 188, 1846. Eastern North America.

Alces muswa Richardson, Zoöl. Voyage of H. M. S. 'Herald,' Vertebrals, p. 102, 1852. Central Canada.

Color.—General color a grizzle of black and woodbrown darkening along spine and changing abruptly to clear black on chest, buttocks, and lower part of sides. Median line of belly hairbrown. Legs hair-brown or broccoli-brown with darker shading. Head like back, but more finely grizzled. Ears yellowish white internally, broccoli-brown externally.

Skull and teeth.—The skull of Alces gigas differs from that of A. americanus in its larger size and greater massiveness, as well as in certain details of form. Chief among the latter is the great breadth of the palate, relatively to the length of the toothrow. In three males of A. gigas the ratio of least palatal breadth (between anterior premolars) to length of toothrow is respectively 47.1, 47.1, and 44.7. In three males of A. americanus it is only 36, 36, and 39. In this respect Alces gigas resembles Alces alces, though the Alaskan animal shows no approach to the conspicuous deepening of the antorbital portion of the skull, or the peculiar form of the premaxillary characteristic of the European species. The occiput is relatively higher and narrower than in A. americanus. In two males of the latter the ratio of depth between inion and lower lip of foramen magnum to greatest width across paroccipital processes is 68.5 and 72.2, while in three of A. gigas it is \$1.8, 84.8, and 87.5.

Measurements.—Of the following tables of measurements the first is based on data furnished by Mr. De Weese. The skull of Alces americanus, measurements of which are given in the second, is that of a very large individual from Maine, considerably older than any of the specimens of A. gigas.

External Measurements of Alces gigas.

Number and sex	86162 ♀	86163 ♀	86164 3	86165 3	86166 3
Tip of nose to base of tail Tail vertebræ. Ear from crown Height at shoulder Shoulder to hip. Depth of body at shoulder Circumference of body at center Tip of nose to angle of mouth	1574 812 2032	2562 88.9 297 1930 1651 851 2082 177.8	2946 101 304 2032 1701 914 2184 177.8	2946 101 304 2032 1727 927 2235 179	3048 101 304 2034 1752 965 2286 177.8

Cranial Measurements of Alces gigas and A. americanus.

	Alces gigas.			mo	A. americanus.
Number and sex	O+	50	50	50	eri 346
				86166 3	146
	86163	86164	86165	316	
	98	86	86	86	च
Greatest length	615	635	645	633	600
Basal length	570	570	596	570	560
Basilar length	556	550	574	550	535
Tip of premaxilla to tip of nasal	275	280	290	285	268
Median palatal length	355	380	390	380	360
Tip of premaxilla to alveolus of first	000	040	000	690	0.05
tooth	$\frac{230}{218}$	$\frac{240}{234}$	$\frac{236}{245}$	$\frac{230}{245}$	$\frac{225}{221}$
Least breadth including orbits	168	190	200	206	180
Least width between antlers	100	190	170	180	165
Least width of frontals between orbits		10/0	1,0	100	100
and antlers		205	210	225	195
Greatest antorbital breadth	133	168	168	172	127
Zygomatic breadth	203	218	223	228	203
Mastoid breadth	147	165	172	168	170
Greatest width of palate including			170	450	* 10
toothrows	143	142	150	156	142
Least width of palate including tooth-	105	110	118	110	98
Greatest width of palate between	105	110	110	110	90
toothrows	90	93	95	101	88
Least width of palate between tooth-					
rows	68	69	67	70	53
Upper toothrow (crowns)	147	143	150	154	147
Distance between tips of paroccipital		,			
processes	85	92	100	95	80
Greatest width across paroccipital pro-		1.05	100	1.05	177
Distance from inion to lower lip of		165	160	165	175
foramen magnum		135	140	140	120
Depth between antlers	122	146	155	143	132
Greatest expanse of antlers	122	1530	1600	1580	1330
Expanse between uppermost points		1200	1140	1120	760
Width of palmation		310	360	360	380
Least diameter between burr and first			24.0	000	1.50
tine		175	210	200	172
Length of mandible	470		485	480	460
Depth of mandible at posterior end	59	62	58	65	59
of toothrow	223	230	235	223	225
Least depth of mandible	30	31	31	34	27
Diastema	180	180	182	183	170
Mandibular toothrow (crowns)	158	152	160	165	160
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